

ESI GROUP 2

.LOBUE #2

US EPA RECORDS CENTER REGION 5



449999



Ben Meadows

1-800-241-6401

FIELD BOOK

#101595

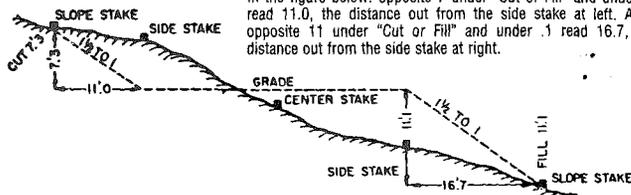
71280.119

#1

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

Property of:

B&V Waste Science and
Technology Corp.

101 N. Wacker Drive
Suite 1100

Chicago, IL 60606

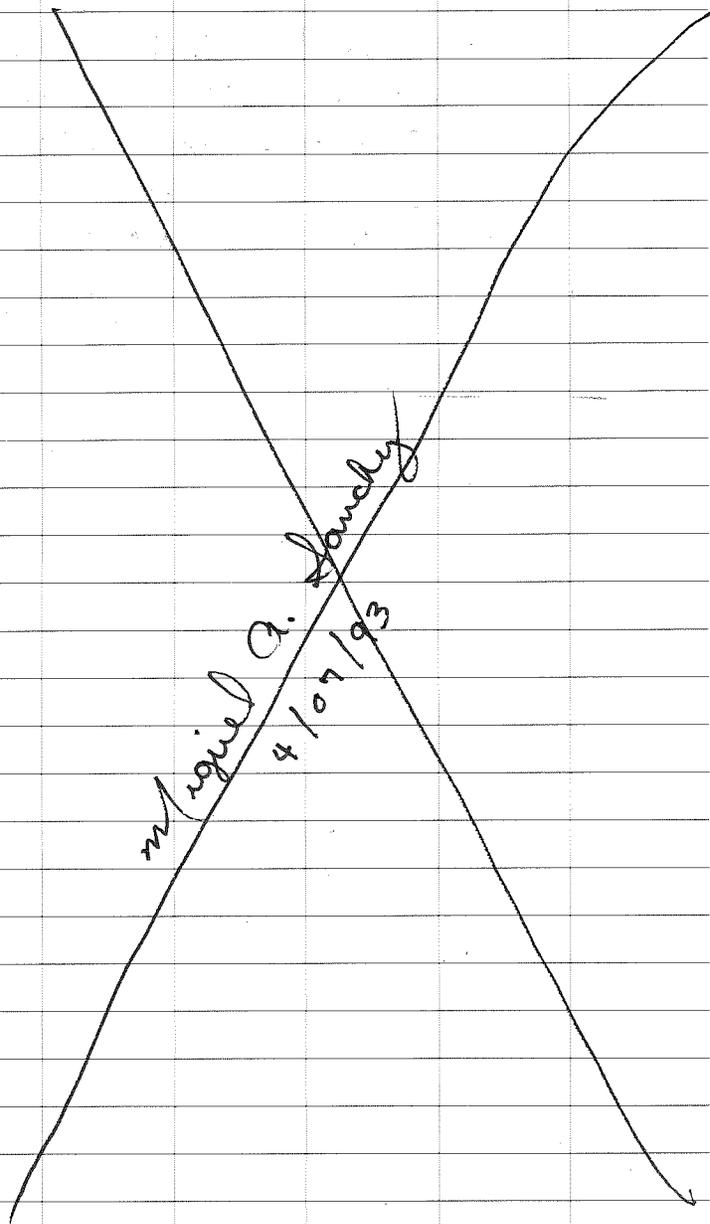
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- USEPA WAM:
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- BVWST Project Manager
Scott Anderson (312) 683-7834

Log book #1

The paper in this book is
made of 50% high grade rag stock with
a WATER RESISTING surface sizing.

3



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4

Ash (?) pile ~ 15 feet high
Black soil? 200 feet diam.
SW m. 8.

Stream along ~~SE~~ corner of
site flows NW. Construc-
tion debris - bricks

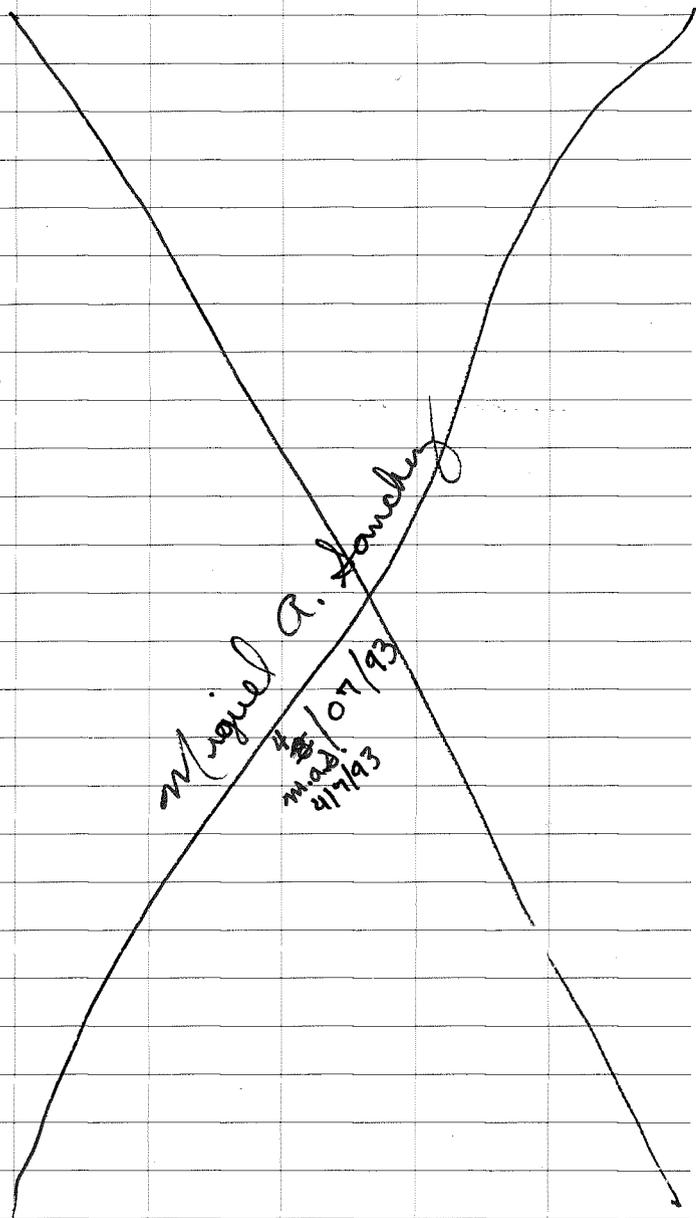
SW m. 8.
Topography of ~~SE~~ corner
hilly with debris scattered
about - growth covering
debris (trees, grass)

photo #3 - looking SE at
several large debris piles
in background

photo #4 - looking N at
large black ash pile -
about 20 feet high by
300 feet diameter. Evidence
of dirt bikers driving on
piles.

photo #5 - Panarama looking
West to ward edge of

⑤



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⑥

property. From top large black ash pile.

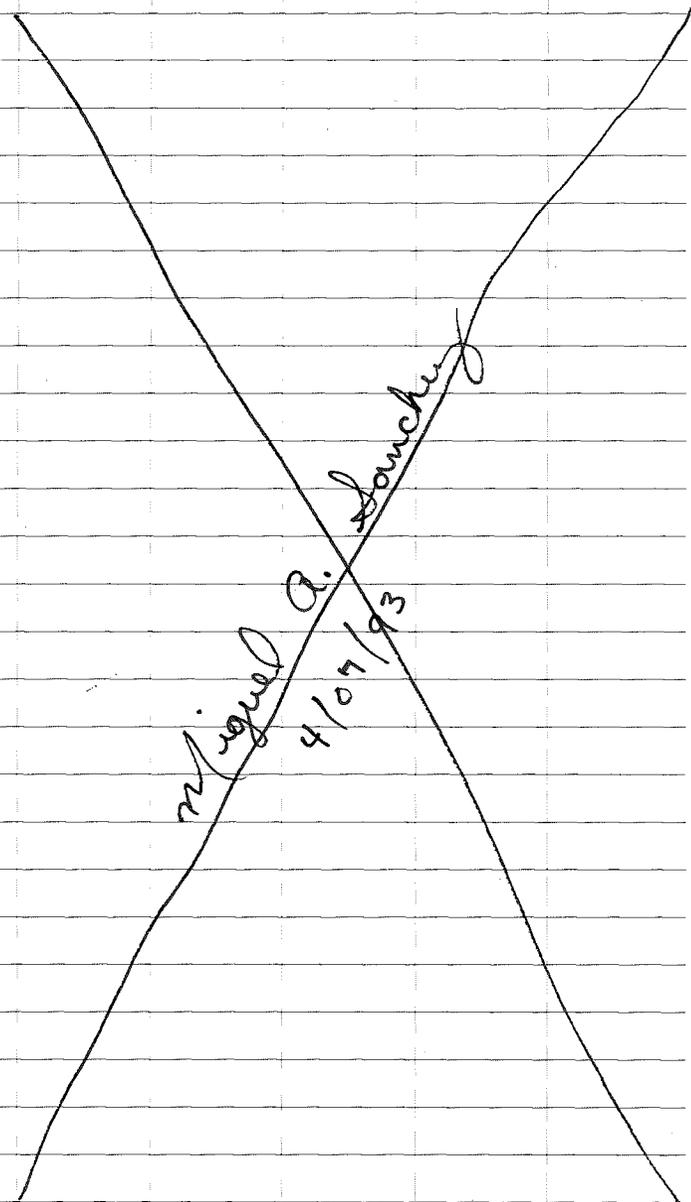
Photo #6 - looking NE from top of large ash pile. Three large tanks, 1. A&T and 1 grain elevator. Also, black tarry substance along N of tanks.

Large black ash piles do not support plant growth except for moss. Mixed ash(?) with pebbles.

At NW corner of site. Abandoned burned out, shotgun sprayed pick up truck with current license tags Illinois 8189 EW

photo #7 looking west at black tarry hard substance. IEPA rep states that probably sourced from tanks

⑦



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⑧

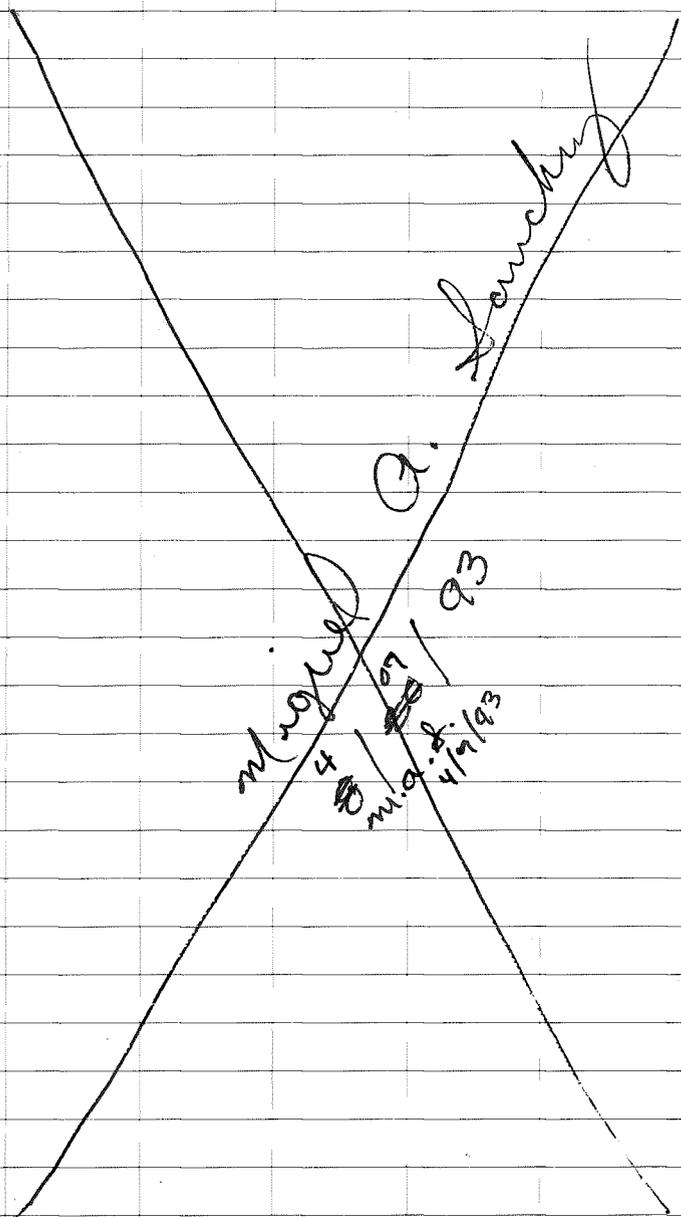
that has either disintegrated or has been removed. Piping and insulation (?) and scrap metal remains. Solidified tar.

Other tanks - 3 on their sides appear hollow. Other two (silo and AGT) contains a little sludge.

photo #8 - waste sand pile (foundry sand?) contains wood and metal debris. looking N.

photo #9 View looking ^{West} at intermittent stream - possible wetland vegetation. Along N property boundary. This is a ditch that likely flows W. Debris laying around. Asphalt paving, metal debris, wood concrete blocks. Along N edge. definitely wetland

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⑩

with ducks, frogs, and vegetation. Evidence of shotgun target practice - clay pigeons.

photo #10 View, looking West along ditch/intermittent stream along N edge of site.

Crushed rusty drums near north property line.

SKETCH

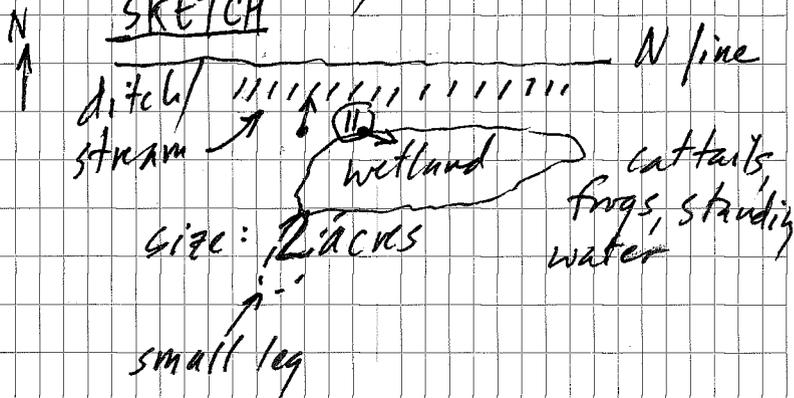
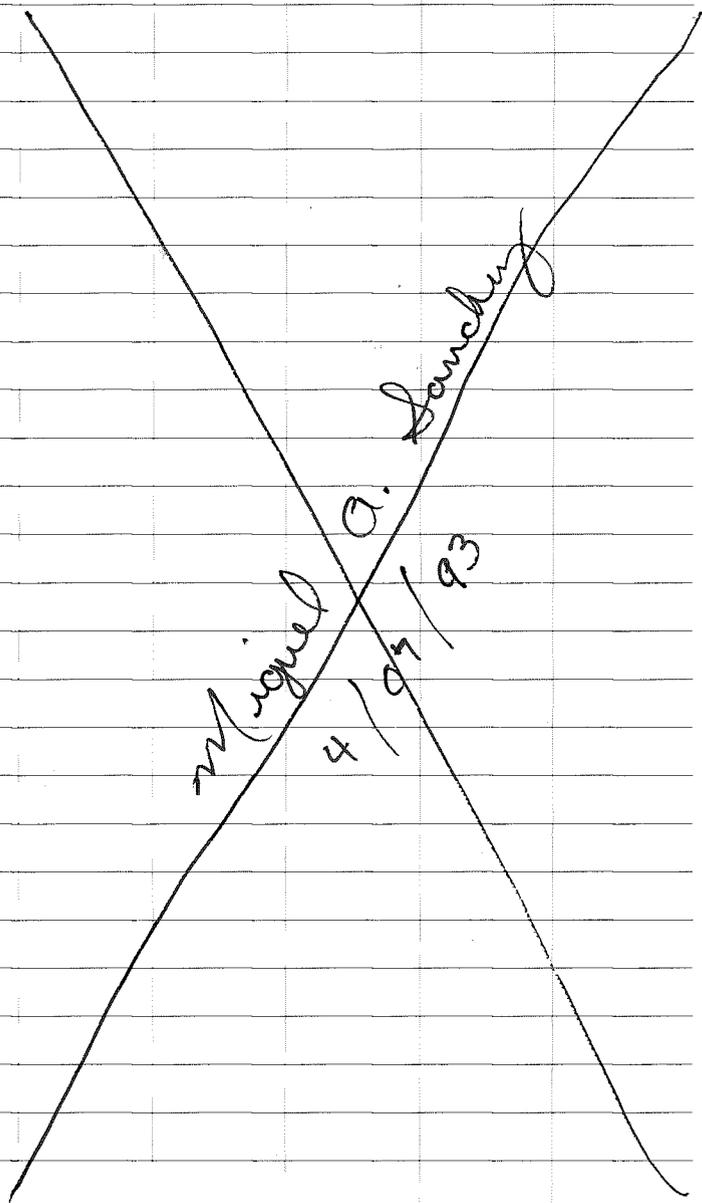


photo #11 looking East at 2 acre wetland area located along N edge of property.

11



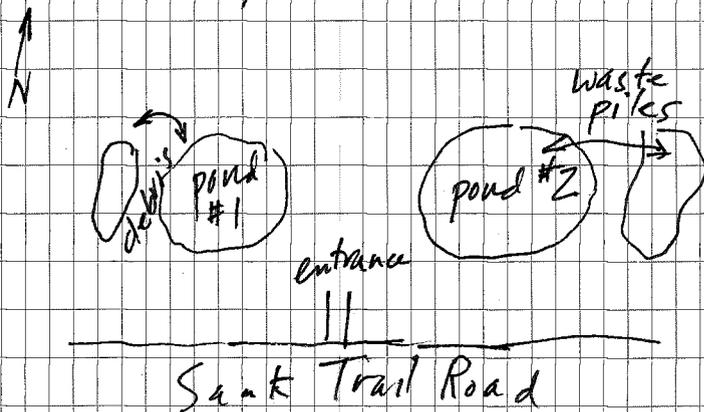
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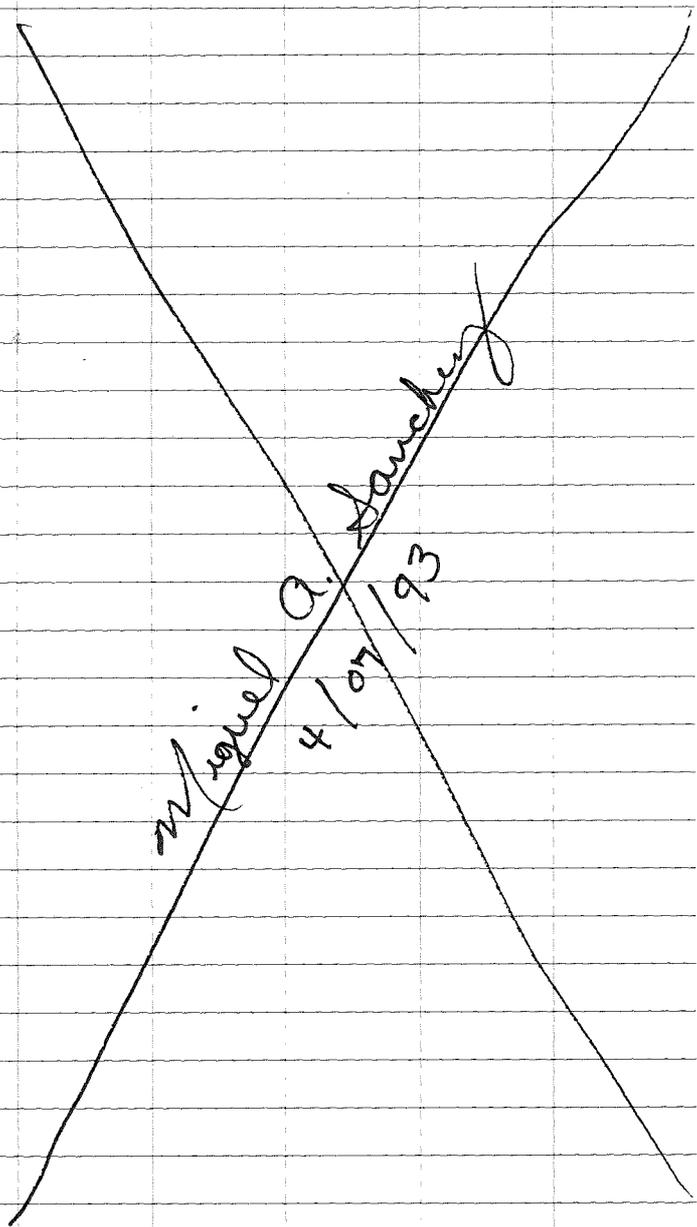
Photo #12 - looking S at large pile of scrap wrought iron - off spec?

Photo #13 - looking S at pond #1 with cat tails at edge and muskrat hut built on pond.

photo #14 - looking SE at pond #2 with large piles of waste metal sitting in water. Filling has occurred all along perimeter of pond.



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most of (14)

Surface topography over the whole site appears to have been extensively altered. Excavating and filling.

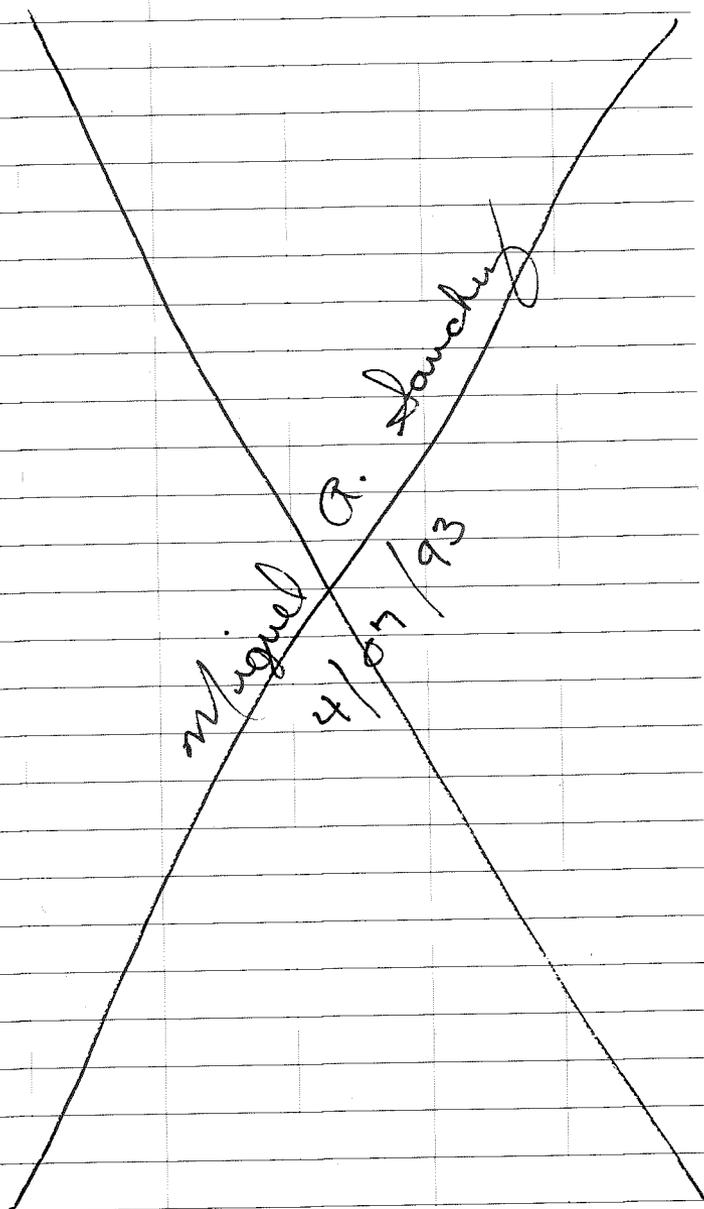
The west perimeter has a berm and ditch along the property line. Ditch contains wetland flora and fauna: frogs, cat tails.

photo #15 looking N along east perimeter wetland area.

The northeast corner of the site appears to be relatively unaltered. Wetlands along N edge and E edge meet at NE corner.

photo #16 looking N at slag pile 10 feet high, 20 feet diameter. Contains scrap metal debris, concrete

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1615 Found MW-4 at SE corner of property. No steel protective casing. Grey Sched 80 PVC with glued couplings. Opened well, could not see down well for evidence of water. Well area surrounded by wetlands and is adjacent along the berm that defines eastern boundary.

Could not find MW-1. Possibly damaged or removed or buried by waste piles. MW-1 is supposedly located near access gate to the west.

Could not find MW-3. Unusual because the area has not been altered much.

House at SW corner of site across Sauk Trail Road.
162 E. Sauk Trail Road.

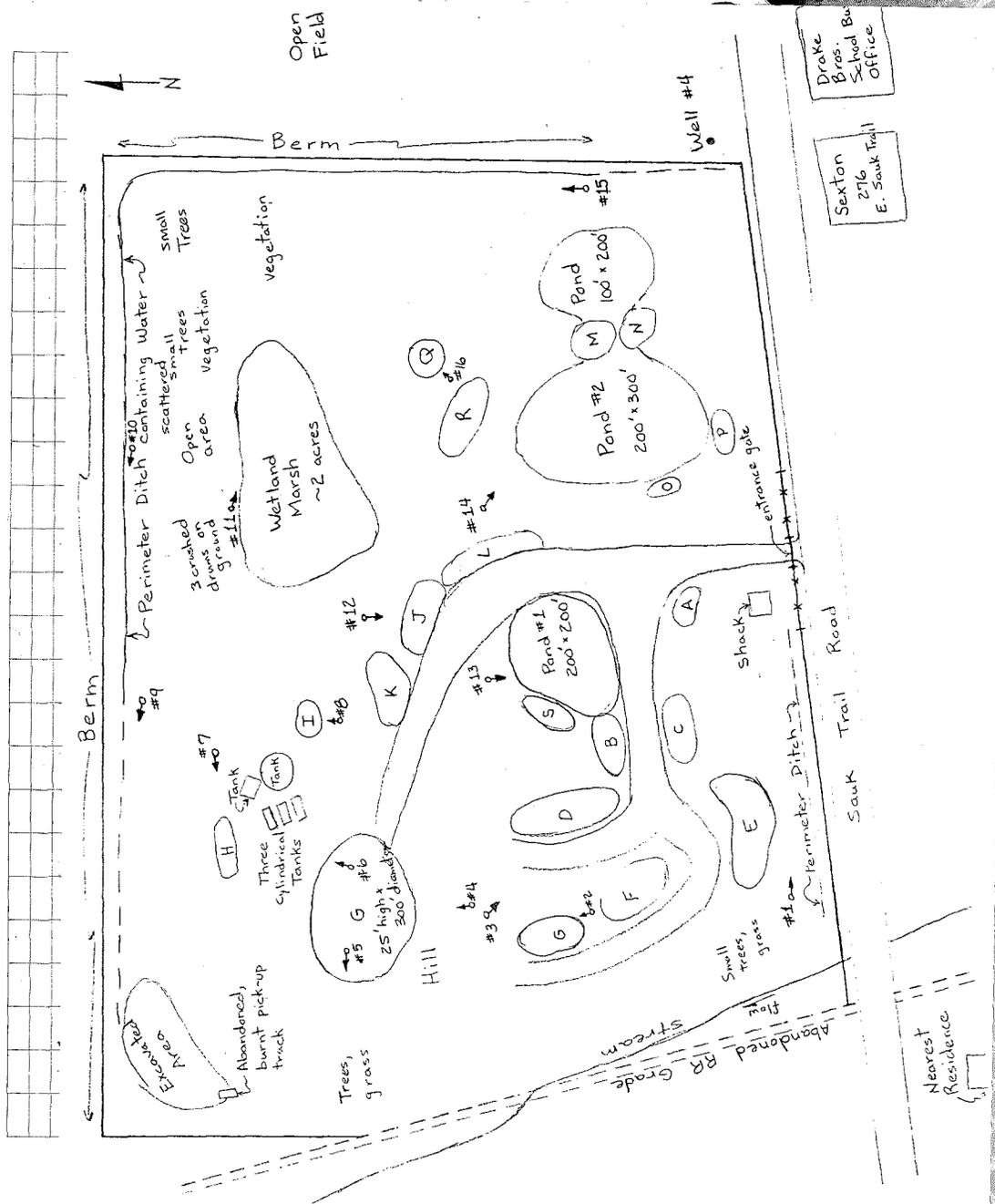
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Site Sketch

<u>Stackpile Identifier</u>	<u>Description</u>
A	stackpile of brick, concrete, wood, demolition debris
B	Brick, concrete, wood, demo. debris, metal, soil (fresh), rebar, wire cable
C	Rubber, belts, hoses, wood, metal
D	Metal sheets, wrought iron, soil
E	Brick, wood, rock, soil
F	Melted iron, metal, gears, soil
G	Black ash stockpiles w/ pebbles
H	Thick Black, solidified tarry substance on ground, very hard, 10'x100'
I	Small waste sand pile (foundry sand?) w/ some wood and metal debris.
J	Large pile of scrap wrought iron
K	Brick and concrete piles
L	soil mound
M, N	Waste metal piles in pond water
O	Small soil mound, brick fragments, rebar
P	Soil mound, scrap iron sheets in H ₂ O
Q	Grey soil pile, scrap metal debris, concrete.
R	Slag pile, scrap metal debris, concrete

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Site sketch (cont'd)

Stackpile

I.D.Description

S

Grey soil, debris

^{tire m.d.}
Fresh tracks at the entrance
to the site leading to large
ash pile ^{m.d.} G indicate that
there ^{m.d.} ~~site~~ may still be
activities occurring onsite. —

There is standing water in
perimeter ditch to the N and
W of the site. Frogs and
wetland vegetation in and around
these ditches. —

Fresh deer tracks, a rabbit
siting, frogs, indicate presence
of wildlife onsite. —

1750 BVWST departs from site.
Charles LoBue did not show
up. No owner/operator represent-
ative interview was conducted.

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Friday, 7-30-93

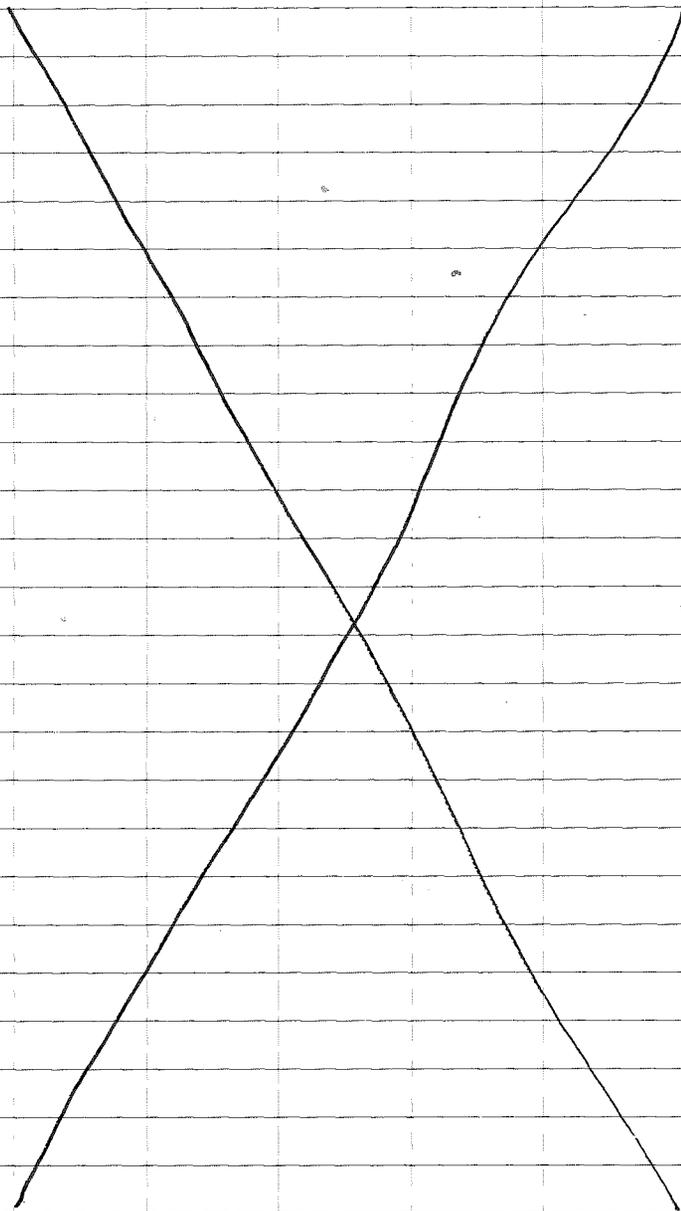
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At approximately 1100, I drove by
the residence at 162 'East Sauk'
Trail Road, which is located
near the southwest corner of the
LoBue #2 site.

I met Mrs. Lustid, who lives
alone at the house. She has lived
at the house for over 35 years.
She still has an active well in the
bedrock. She does not drink from it
because of a bad smell and taste.
Her dog drinks water from the well.
Mrs. Lustid gets water from her
daughter, who fills containers at
her job.

Mrs. Lustid said she is the only one
she knows who has well water in
the area. She thought people on
30th Street to the south are on
water but will soon get city
water. She said she thought her
well was about 125 feet. Two

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years ago a new pump was put in at about 80 feet.

Her mailing address and phone number:

Mrs. Lustid

P.O. Box 162

Steger IL 60475

708-755-3096

She said that over the years, midnight dumping was gone on. The site was presently active with several vehicles located onsite. Tractors, magnetic cranes, Ford Explorer, dump trucks, semi-trailer. One truck was labeled 'HAPPS INC., Northbrook, IL.'

Mrs. Lustid said the site had been idle for a long time. She said carpet had been burned at the site and smelled badly.

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August 20, 1993

1500 At the B&V Waste Science and Technology warehouse to pack the vehicles with the equipment needed to sample at the LaBue #2 site. I will also begin labeling some of the sample containers in preparation for the sampling. ^{mid. 8/1993} to The sampling trip will begin August 23, 1993 (Monday). Soil, sediment, and waste source samples will be collected during the trip. —

1510 Brake custody seal on a box of 120 ml (4oz.) clear wide mouth glass jars with polyprop. lids. The custody seal is a Eagle-Picher Environmental Services ^{mid.} seal dated Feb. 27, 1991. The lot # is G1031020. There are 24 containers in the box. —

1520 Brake custody seal on box of 250 ml (8 oz.) Clear wide mouth jars w/ PP lids. It is a full box (24 containers) and the

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lot # is F3211050. —

1540 Start labeling containers for sediment samples. Also set up table on next page, filling in Sample, CLP Organic Sample #, and CLP Inorganic sample #. —

1605 Brake custody seal on box of 250 ml (8oz.) clear wide mouth jars with PP lids. It is a full box (24 containers) and the lot # is F2195010. Also brake custody seal on box of 120 ml (4oz.) clear wide mouth glass jars with PP lids. It is a full box of containers (24) and the lot # is G1163010. Also set up table on page 27. —

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SAMPLE	CLP ORG. #	CLP INORG #	Sample Tag #s	Time
ST01	ESE61	MEBV21		1020
ST02	ESE62	MEBV22		
	m.t. 8/19/93			
	ST02 DUP			
ST03	ESE63	MEBV23		
ST03	ESE64	MEBV24		
ST04	ESE65	MEBV25		
ST05	ESE66	MEBV26		
ST06	ESE67	MEBV27		
ST07	ESE68	MEBV28		
ST08	ESE69	MEBV29		
ST09	ESE70	MEBV30		

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Note: all of the 120 ml (4oz.) clear wide mouth glass vials for the samples listed above are from lot # G1031020. The 8 oz. jars

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Remarks

Duplicate of ST02

Rinsate blank for sediment

are from lot # F3211050 for all the samples listed above, except the rinsate blank.

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SAMPLE	CLP ORG.#	CLP INORG.#	SAMPLE TAG #s	TIME
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~~SS01 ESE71 MEBV31~~

~~SS02 ESE72 MEBV32~~

~~SS02 DUP ESE73 MEBV33~~

Note: The soil samples above have 120 ml (4 oz.) clear wide mouth glass vials from lot # ^{M.L. 8/19/93} G1031020. The 8 oz. jars are from lot # F3211050.

~~SS03 ESE74 MEBV34~~

~~SS04 ESE75 MEBV35~~

~~SS05 ESE76 MEBV36~~

~~SS06 ESE77 MEBV37~~

~~SS07 ESE78 MEBV38~~

~~SS08 ESE79 MEBV39~~

~~SS09 ESE80 MEBV40~~

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8/20/93~~

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REMARKS

Duplicate of SS02

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reclaim some of the steel scrap waste that is present at several locations onsite, some in stockpiles, some spread on the ground. They workers are presently operating in the SW section of the property. It is evident that some of the waste piles onsite have been moved or new piles created. Most of the new piles consist of soil w/ debris intermixed. I exchange business cards with one of the workers. The business card reads the following:
 "Phoenix Trading Company of Chicago, Inc., Stephen L. Grafrath, President, 822 Golf Lane, Barrington, Illinois, 60010, office (708) 304-5181, Mobile (708) 431-3867."

0840 weather check: Mostly sunny, hazy, humid, temp. ~80°F, winds calm, out of the S, SW.

0915 Complete unloading the two vehicles we have w/ us onsite. All equipment placed over plastic ^{m.s. 8/23} sheeting bags.

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in the dirt road approx. 200' N of the entrance gate.

0930 Calibrate HNU, EPA # 717881, with 10.2 eV probe, EPA # 717955. Span adjusted to 9.12. Read 58 ppm isobutylene, as stated on the cylinder. Back ground reading 0.15 ppm.

Note that it is humid. Check mini-rad, Radiation Alert Monitor 4, EPA # 717979. Battery O.K. Initial reading is 0 mR/hr on all range settings. Monitoring will be done on ^{m.s. 8/23/93} the X1 range.

Check HCN meter. Battery O.K. The ^{m.s. 8/23} HCN meter is EPA # 465883, initial reading is 0 ppm.

0935 The location where we unloaded vehicles, ~200' N of the entrance gate is the support zone. The initial readings w/ the monitoring instruments, shown in today's 0930 entry, were taken at this location.

0955 Have prepared equipment (sampling and PPE to sample sediment locations ST01 and ST02. We will use one

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of the vehicles to drive out to the locations. The other vehicle will stay in the support zone. Matt Mastronardi and I will go collect the samples. Wade will stay in the support zone to start the data management.

- 1020 Collect sediment sample ST01. This is the background sample. The sample is being collected from the unnamed stream, upstream of the site, approx. 50' south of the south side of the bridge at Sauk Trail Road. Sample is being collected from the west ~~end~~ ^{bank} of the creek by Matt M. using a decontaminated stainless steel spoon. Sample put from spoon directly into sample containers. HNU reads background at the sample collection point. Rad meter and HCN meter both read zero. The sample was a silty ^{grey m.s.} clay mix, organic, dark, mucky odor. Sample taken near the water/sediment

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- interface
- 1030 Roll #2, photo #1. Facing S. looking at sediment sample location ST01. The orange flag marks the sample location. ^{mt. 8/23/93} See the 1020 entry for the description of the location. Picture taken standing on the bridge at Sauk trail Road.
- 1035 Note that the EPA and BWST Sample numbers for ST01 are as follows:
- CLP organic #: ESE61
- CLP inorganic #: MEBV21
- BWST sample #: LB-ST01-001
- Four containers were filled; 2 4-oz jars and 2 -8oz jars.
- 1050 Return to support zone and hand sample ST01 to Wade Gregson, the FDC. Prepare to go sample location ST02.
- 1100 Matt and I walk over to sediment sample location ST02 to collect sample.
- 1115 Begin sampling location ST02. A duplicate is also being collected at this location. The primary and dup.

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Samples are being collected concurrently. The sample location is at the unnamed stream, downstream, by a railroad bridge at the west property line, about midway down the property line, at a location ~~were~~ ^{mid 8/23/93} where ~~it~~ ^{mid 8/23/93}

a ravine coming from the site empties into the ~~ravine~~ ^{mid 8/23/93} stream. ~~ravine~~.

Sample is being collected from the ~~side~~ ^{mid bank 8/23/93} of the creek closest to

the site, approx. 5' east of the railroad bridge ^{(culvert) mid 8/23/93}. Sample is being collected by Matt M. using a deaned stainless steel spoon.

HNU reads background at the sample collection point. The sample is a grey clay w/ silt and organic material. Sample taken near the water surface/sediment interface.

1130 Finished collecting sediment samples ST02 and ST02 DUP. The

Sample #s are as follows: —

ST02: CLP org. # ELEG2 —

CLP inorg. # ~~EE~~ ^{mid 8/23/93} MEBV22 —

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BWST #: LB-ST02-001. —

ST02 DUP: CLP org. # ELEG3

CLP inorg. # MEBV23

BWST #: LB-ST02-101. —

Photo #2, Roll #2: Sediment sample location ST02. The red flag marks the sample location. Photo taken facing N, standing near SE corner of railroad bridge ^{(culvert) mid 8/23/93}.

1140 Return to support zone and hand samples ST02 and ST02 dup over to Wade. —

1205 Matt and I leave the site to go buy lunch. Wade stays onsite to continue data management activities.

1220 Matt attempted to call Joe Gadomski to see if he had our lab assignments. Joe was not in. Left message. —

1235 Back onsite. Break to eat lunch. —

1300 Lunch break over. Wade will continue sample data management. Matt and I prepare to sample sediment location ST03. —

1305 Weather check: Sunny, hot, temp. ~90° F, humid, light breeze from SW.

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1320 At sediment sample location ST03. Begin sampling. The sample is from pond #1, approx. 150' N by NW of the entrance gate. The sample is from the SW ^{side m.s.} of the pond, at the surface water/sed. interface. Sample is a clay with some organic silt, gray in color. Sample is collected using a deconed stainless steel spoon. HNU reading is background at the sample collection point. Sample was collected by Matt.

1330 Finished collecting sediment sample ST03. ST03 will also be used for the MS/MSD for sediment. The sample #'s are as follows: —
 CLP org. #: ELE64 —
 CLP inorg. #: MEBV24 —
 BWST #: LB-ST03-001. —
 Four containers filled. The lot #s for the containers are on page 25. Roll #2, Photo #3 taken facing S, standing along bank of pond #1. Sediment sample location ST03 marked

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by the red flag. Sample location is near soil/slag/debris waste-piles along the bank of the pond to the SW. —

1345 Return to support zone and hand sample ST03 over to Wade. Prepare to sample sediment samples ST04 through ST08. —

1420 Begin sampling sed. sample location ST04. The sample is from pond #2. The sample is from the ^{south 8/23/93} ~~bank~~ ^{north 8/23/93} of the pond, ~50' ^{m.s.} ~~SW~~ north of Sauk Trail Rd., at the surface water/sed. interface. The location is ~25' E, NE of waste pile P. This does not correspond to the location for ST04 shown on the implementation plan. Location was changed because of accessibility. The sample is a sandy silt w/ some organic muck, dark grey. HNU reading background. The sample #'s are: —
 CLP org. #: ELE65 —
 CLP inorg. # MEBV25 —
 BWST #: LB-ST04-001 —

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Roll #2, photo #4 of sediment sample location ST04. Picture taken facing E, standing on edge of pond. Wastes are exposed along the edges of the pond.

1500 At sed. location ST08. Begin sampling. The sample is from the east perimeter ditch, east bank, approx. 100' N of Sank Trail Rd. Sample is collected at the surface water/sed. interface using same techniques as previous samples. Sample is a grey silty clay w/ organic matter. HNU readings were background. Sample was collected by Matt. Sample #5 are:

CLP org. #: ESE69
 CLP inorg. #: MEBV29
 BWST #: LB-ST08-001.

The ditch is full of vegetation, cat tails, and debris. A drum was noted on the south end of the east perimeter

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 1515
 1315 ditch. Standing water is in the ditch. Finished sampling ST08. Photo #5, Roll #2 taken facing south, standing along east bank of east perimeter ditch, looking at

mid. 8/23/93
 1530
 1330 Sample location ST08. Back at the support zone. Give samples to Wade (FDC). Prepare to sample ST05, ST06, and ST07.

1555 LOG ASSIGNED TO MATT MASTONARD (MAM). MIGUEL SANCHEZ (MAS) + I DEPART SUPPORT ZONE FOR ST05.

1605 @ ST05, AT ^{SE M.A.S. 8/23/93} SW CORNER OF THE MARSH.

1610 MAS BEGINS COLLECTING ST05. SAMPLE IS DARK BROWN/DARK ORGANIC SILT. HAS MUCKY ORGANIC ODOR. SAMPLE IS FULLY SATURATED. THERE IS SOME CONCRETE W/ REBAR AT EDGE OF MARSH + LOTS OF CAT TAILS.

CLP ORG: ESE66 CLP INORG: MEBV26
 HNU @ BACKGROUND DURING SAMPLING.
 PHOTOG ROLL 2 FACING SW: ST05 LOCATION. SAMPLE COLLECTED JUST

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LEFT OF THE STUMP. ←
 1625 LEAVING ST05 LOCATION
 HEADING N. AROUND PERIMETER
 OF THE MARSH. ✓

1635 AT ST06 LOCATION,
 AT NW CORNER OF THE
 MARSH. WE FOLLOWED A RAIN
 STRIP OF CATTAILS/MARSH, ^{W. M.A.S. 8/23/93} ✓
 TO WHERE IT WIDENED. HNU
 READING BACKGROUND ✓

1643 MAS BEGINS COLLECTING
 ST06, SAMPLE HAS DARK APPEARANCE,
 IT IS AN ORGANIC BLACK SILT.

NO DEBRIS OR OTHER WASTE
 IS VISIBLE AT THIS LOCATION.
 SAMPLE IS FULLY SATURATED. AREA
 IS SURROUNDED BY CATTAILS,
 ODOR IS ORGANIC, MUCKY, HNU
 ⊕ BACKGROUND DURING SAMPLING

1652 ST06 COMPLETE. ✓

PHOTO 7, ROLL 2, FACING S.
 ST06 LOCATION AT CENTER
 OF PHOTO, NEAR SAMPLING SPOON
 CLIP #S. ORG: ESE67, INORG: MEBV27.

1652 DEPART ST06. ✓

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1700 AT ST07 LOCATION, ABOUT
 200 FEET NW OF ST06. LOCATION
 IS AT THE SOUTHERN BANK OF THE
 PERIMETER DITCH, JUST S. OF LARGE
 BERM. ✓

1703 MAS COLLECTING ST07. SAMPLE
 SAMPLE IS DARK, MUCKY ORGANIC
 MATTER, WITH GRAY CLAY & SOME SMALL
 DEBBLES. HNU ⊕ BACKGROUND BEFORE
 & DURING SAMPLING. SAMPLE FULLY
 SATURATED. PHOTO 8, ROLL 2, ST07
 LOCATION DESCRIBED ABOVE, AT
 DITCH/WATER INTERFACE. SAMPLE
 WAS COLLECTED NEAR THE SPOON
 SHOWN. ✓

1720 ST07 COMPLETE. HNU STILL
 ⊕ BACKGROUND. ✓

1725 DEPART ST07, HEAD TO
 SUPPORT ZONE. ✓

1735 BACK TO SUPPORT ZONE. ✓
 ST05, 6, 7 LEFT BY WAG. ✓

1750 Prepare rinsate blank for sediments
 by pouring d.i. water over a decaised
 stainless steel spoon, then putting
 the spoon in the container of d.i.

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water, shaking the container, and pouring the water into ^{ml.} ~~se~~ containers for water samples. Sample prepared by MAS and MAM. The sample no's. are: _____

CLP org. #: ESE70 _____

CLP inorg. #: MEBV30 _____

BWST #: LB-ST09-201. _____

^{m.s. 8/23/93}
The ~~two~~ VOA vials are pre-preserved

w/ HCL by the supplier. The 2-liter poly for metals analysis is preserved w/ HNO₃, the 1-liter poly for cyanide analysis is preserved w/ NaOH. The d.i. water is Hinckley and Schmitt sodium free, mineral free d.i. water.

The serial # on the two gallons used for the rinsate blank ^{m.s. 8/23/93} ~~is~~ 710916-4.

1800 Prepare trip blank for the rinsate blank that is being sent for analysis (see 1750 hrs. entry). Water poured directly from d.i. water container into 40 ml pre-preserved vials (2). The serial number on the d.i. water container is the same as

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for the containers used to prepare the rinsate blank prepared today. No bubbles evident on the sample vials. The sample #s are:

CLP org. #: ESE87 _____

BWST sample #: LB-TB01-201- _____

1830 MAM goes buy ice for shipping of samples. Most of the ice we bought this morning has melted. WAG continues doing paperwork for samples. I prepare to decon sampling spoons used to collect the samples today. _____

^{m.s. 8/23/93}
1905

1705 Finished deconing sampling spoons.

Decon consisted of an alcomox wash, rinse w/ tap water, and rinse w/ d.i. water. The spoons were placed over aluminum foil to allow to air dry. _____

^{m.s.}
8/23/93
1910

1710 The workers (approx 4) reclaiming the steel scrap waste have left the site for today. They asked us to lock the entrance gate when we left. They said they would be back tomorrow at 0700hrs.

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- m.f.
8/23/93
1915 Also MAM is back onsite. —
- 1915 Note that WAG got the lab assignments from Joe Gadomski earlier today. WAG continues w/ paperwork for samples collected today. —
- m.f.
8/23/93
1920 MAM has begun his duties as a SQAQ by checking the quality of the OTR, ITR forms. —
- 1945 Wrap decon'd spoons in aluminum foil. Start packaging coolers to ship samples out tonight. —
- 2015 Leave the site for today. Will go to Fed. Ex. office to drop off two coolers containing the samples collected today. We lock the entrance ^{m.f. 8/23/93} & gate as we leave. Activities onsite will continue tomorrow.

~~Miguel A. Sanchez
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Tuesday 8/24/93

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- 0735 Matt M. and I arrive at the LaBue #2 site. Wade G. is already onsite. The workers reclaiming the steel scrap waste are also onsite. Sampling activities will continue today. Soil and waste pile samples will be collected today. —
- 0740 Weather Check: Overcast, cool, temp. ~70°F, winds from the west, light. —
- 0741 Start unpacking the vehicle and preparing for today's sampling activities.
- 0800 Complete unloading the two vehicles we have w/ us onsite. All equip. placed over plastic sheeting. The support zone is the same as yesterday. Matt M. has gone to buy ice and call the office. —
- 0810 Calibrate HNU, EPA # 717881, with 10.2 eV probe, EPA # 717955. Span adjusted to 8.96. Read 58 ppm, as stated on the isobutylene cylinder. Background reading is 0.15 ppm. Check mini-Rad, EPA # 717979, battery O.K., initial reading is
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0.01 mR/hr or 10 cpm ^{m.d. 8/24/93} ~~check~~
 in the x1 range setting. Check
 HCN meter, EPA # 465883, battery
 o.k., initial reading is 0 ppm.
 All readings were taken in the
 support zone.

0845 Ready to begin sampling. We'll
 be collecting soil samples first.
 Head over to soil sample location
 SS04 ^{m.p.} next ~~+~~ in the SW corner
 of the site.

0910 NOTES BY M.A.M. ✓

AT SS04 LOCATION, AT SW
 CORNER OF SITE, AT SW CORNER
 OF WASTE PILE WE CLEAR WASTE
 (METAL, BRICK, ASS'T. DEBRIS)
 DOWN TO SOIL WITH A DISCONNECTED
 SHOVEL AND COLLECT SOIL. ✓

0920 SS04 COMPLETE. NO HNU
 ABOVE BACKGROUND BEFORE OR
 DURING SAMPLING. SOIL WAS BLACK
 TOPSOIL W/ SOME SAND. SAMPLE
 WAS MOIST NO ODOR NOTICED.
 PHOTO 9, ROLL 2. ^{SS04 m.a.s. 8/24/93} ~~SP04~~ LOCATION
 DESCRIBED ABOVE, FACING E.

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SAMPLE COLLECTED NEAR SPOON SHOWN.
 S.S. SPOON SHOWN WAS USED TO
 COLLECT SS04. ✓

0945 AT SS03 LOCATION, ABOUT 60
 FEET NW OF SS04, NEAR A WASTE PILE
 CONTAINING ^{MAM 8/23/93} ~~MOIST~~ WASTE METAL & SOL.
 M.A.S. COLLECTING SAMPLE. ✓

0950 HNU BACKGROUND @ SS03. ✓

0955 SS03 IS DARK BLACK SOIL/SAND
 W/ SOME SMALL SLAG PIECES, AND TOPSOIL.
 HNU STILL BACKGROUND. ✓

0950 SS03 COMPLETE. MAS, MAN
 BACK TO VAN W/ SAMPLE. SAMPLE
 PLACED ON ICE W/ SS04 IN COOLER.
 PHOTO 10, ROLL 2 FACING E. SS03 LOCATION,
 NEAR SAMPLING SPOON. ✓

1005 AT SS05 LOCATION, JUST
 W. OF POND, BETWEEN TWO WASTE
 PILES OF DEBRIS + SOIL. ✓

1010 M.A.S. COLLECTING SS05, IT
 IS MOIST BLACK SILT/SAND, HNU
 IS AT BACKGROUND. SAMPLE IS
 MOIST FROM LAST NIGHT'S RAIN. NO
 NOTICEABLE ODOR. ✓

1015 SS05 COMPLETE. PHOTO 11

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ROLL 2. SSO5 LOCATION, FACING E. WASTE PILE VISIBLE IN THE BACKGROUND. ✓

1022 HEADING BACK TO SUPPORT ZONE IN VAN, WITH SAMPLES IN THE COOLER W/ ICE. ✓

1025 BACK AT SUPPORT ZONE. 3 PERSONS (? EPA) ONSITE. ✓

1055 MAM, MAS DEPART SUPPORT ZONE TO SSO9 LOCATION, EPA REPS ACCOMPANY US. ✓

1105 AT SSO9 LOCATION, ABOUT 100' N OF SAUK TRAIL, AT E. SIDE OF POND, NEAR A WASTE PILE. ✓

1110 AT SSO9, HNU IS BACKGROUND. SOIL IS SANDY, DRY, BROWN. NO ODOOR OR OTHER SIGNS OF CONTAMINATION. ✓

1115 SSO9 COMPLETE, NO HNU > BACKGROUND. PHOTO 12, ROLL 2 FACING W. ^{SW ^{MAM 8/24/93}} SSO9, NEAR POND, VISIBLE IN BACKGROUND. ✓

1130 BACK AT SUPPORT ZONE SSO9 DROPPED OFF W/ WADE. ✓

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1145 MAM, MAS, DEPART SUPPORT ZONE FOR SSO8 LOCATION. ✓

1150 AT SSO8 LOCATION, APPEARS TO BE AT THE NORTH PORTION OF ^{HANDS/24/93} THE WASTE PILE DESIGNATED AS "R" IN THE SSIP. ✓

1155 HNU @ BACKGROUND @ SSO8. MAM COLLECTED SAMPLE. IT IS SANDY, DRY SOIL. ✓

1205 SSO8 COMPLETE PHOTO 13, ROLL 2 SSO8 LOCATION, FACING S. WASTE PILE "R" VISIBLE IN BACKGROUND. ✓

1208 DEPART SSO8. ✓

1210 AT SSO6 LOCATION, ABOUT 150 FEET S. OF THE N. DITCH, ABOUT 200 FEET NW OF SSO8. ✓

1215 RANDY, OF SOUTH COOK CTY. MOSQUITO ABATEMENT IS ONSITE, OBSERVING MOSQUITO PRONE AREAS. HE SAYS THAT THEY SPRAY ONCE / 8 DAYS, APPROXIMATELY. THEY ARE LOCATED ON SAUK TRAIL & ^{MAM 8/24/93} CHICAGO STATE ST., JUST DOWN THE STREET. ✓

1225 MAS BEGINS COLLECTING SSO6, SOIL IS BROWN, DAMP TOP SOIL

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NO ODOR, OR HNU READING
ABOVE BACKGROUND.

1231 SSO6 COMPLETE. STILL NO
HNU > BACKGROUND. SAMPLES
IN COOLER IN VAN (IN SIGHT)

1235 PHOTO 19, ROLL 2 SSO6
LOCATION FACING SW, NEAR
SAMPLING SPOON.

1238 DEPARTING SSO6.

1245 Matt and Miguel depart
site for lunch.

1352 USEPA auditors returned to
site to look at paperwork.

1316 Matt and Miguel returned
with lunch.

1340 Lunch break over.

1400 NOTES BY M.A.M.

M.A.M. & M.A.S. LEAVE SUPPORT
ZONE, HEAD TO COLLECT REMAINING
SOIL, WASTE SAMPLES.

1425 AT WSO1 SAMPLES (TAR)
NW OF TANKS. WE BREAK UP
TAR W/ A HAMMER, WITH A
PLASTIC TRASH BAG OVER THE
TAR. PULL PIECES OF TAR IN

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ORG. SAMPLE BOTTLES. NO WORD ON
INORG. LAB, SO NO INORG. COLLECTED.
1435 WSO1 COMPLETE. PHOTO 19,

ROLL 2, FACING SE, WSO1 LOCATION.
1440 NOTE: HNU & BACKGROUND

FOR WSO1 SAMPLING.
(DEPART WSO1 LOCATION.)

1445 DECIDE ^{MAM 8/24/93} SSO2 + DUPE
ARE TO BE COLLECTED NEAR WSO1,
ABOUT 6 FEET DOWN GRADIENT (NNW)
HNU & BACKGROUND AT THIS LOCATION.

1447 MAS COLLECTING SSO2 & DUPE,
FILLING JARS SPOONFUL BY SPOONFUL,
TRYING TO GET MOST REPRESENTATIVE
DUPLICATE.

1449 HNU STILL & BACKGROUND.

1502 SSO2 & DUPE COMPLETE. PHOTO 16
ROLL 2, SSO2 LOCATION, FACING SE.

1505 DEPART SSO2, HEAD TO WSO2 &
DUPE.

1510 AT WSO2/DUPE IT IS ~ 75'
^{S.W. M.A.S. 8/24/93} ~~N.E.~~ OF SSO2 (FOR VOAS) ON THE
N. SIDE OF THE ASH PILE. MIGUEL
MOVES TO 3 OTHER LOCATIONS FOR
EXTRACTABLES & COLLECTS A COMP.

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DS WE SAMPLE FOR THEM. —

1518 NO HNU ABOVE BACK-

GROUND FOR ~~SSO~~ ^{MAM 8/24/93} WSO2 LOCATIONS.

1520 WSO2 DUPE COMPLETE.

PHOTO 17, ROLL 2 FACING SW,
WSO2 LOCATION, NEAR PINK
PLUG. —

1545 At soil sample location SS01.

This is the background soil
sample. Matt M. begins sampling.
The soil is a light brown top
soil. He is on the berm north
of the north perimeter ditch,
approx. 50' south of the power
lines that run along the north
property line. It is a grab
sample collected with a s.s.
spoon. —

1550 Roll #2, photo #18: Soil sample
location SS01. Picture taken
facing W. —

1610 Attempted to find the 3 crushed
drums north of the wetland
marsh that were noted during
the recon visit. We're unable

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to find drums because of the
heavy, tall vegetation. This is
where soil sample location SS07
is located. Because we could not
find the drums, we decided not
to collect the soil sample SS07. —

1630 Back at the support zone. Hand
over samples collected to Wade G.

1705 AT WSO5 (MAM, MAS), NOTES
BY MAM, IT APPEARS AS PILE "Q"
IN THE SOIL. CONSISTS OF GRAY
SLAG & CRUSHED METAL/DEBRIS.
PILE IS ABOUT 30' IN DIAMETER,
15' HIGH. NO HNU ABOVE BACK-
GROUND. —

1710 MAS DONE FILLING WSO5
BOTTLES. NO HNU READINGS DURING
SAMPLING. VOA: GRAB EXT: COMP. —
PHOTO 16, ROLL 2 FACING NE. PILE "Q"
WHERE WSO5 WAS COLLECTED. —

1725 AT WSO4 LOCATION, IT IS A
PILE ABOUT 50' NE OF THE LARGE
BLACK ASH PILE. IT APPEARS TO BE
FOUNDRY SAND. —

1730 MAS COLLECTING WSO4.

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HNU ~ 0.5 ppm. VOA: GRAB

EXT: COMP. ✓

1735 WSO4 COMPLETE. PHOTO 19,
ROLL 2 FACING NW. WSO4 LOCATION,
FOUNDRY(?) SAND PILE. ~ 6' x 25'
DIAMETER.

1800 AT WSO3 LOCATION, WASTE
PILE HAS BEEN GRADED DUE TO CONST.
WORK ONSITE (SALVAGING, ETC.);
BUT SOIL, IRON, ETC. IN ORIG. PILE
ARE EVIDENT. ✓

1803 MAS COLLECTS WSO3, IT IS
ABOUT 80 YARDS SE OF THE LARGE
ASH PILE. PHOTO 20, ROLL 2
FACING NW. WSO3 LOCATION,
JUST TO LEFT OF CONCRETE CHUNK.
NOTE: HNU AT BACKGROUND FOR
SAMPLING AT WSO3. ✓

1810 AT SUPPORT ZONE, WITH
SAMPLES, TURNING THEM OVER TO
WAG. NOTE: SCOTT ANDERSON
CAME ONSITE ABOUT 1750. ✓

1915 Matt M. is checking the quality
of the paperwork done by Wade G.

^{m.a.g.}
~~8/24/93~~ for the samples. I am decreasing

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S.S. spoons used for sampling today. ✓

1945 Packing soil samples collected today
to send to the lab tonight. Waste
source samples will not be shipped
until tomorrow. ✓

2015 Matt M. and I leave the site to
go to Fed. Ex. to drop off 2 coolers
containing the soil samples today.
Wade has put custody seals on
the cooler containing the waste
source samples collected today. The
waste source samples will be pack-
aged and shipped tomorrow. Wade
G. will finish picking up ^{up} the
supplies we have in the support
zone and will be leaving soon. This
sampling event at the Lake #2
site has been completed. ✓

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Note: Refer to Logbook #2 for
additional activities for
this sampling event. m.a.g.

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October 19, 1993

0730 John Noyes (BWST) and I arrive at the LoBue #2. Front gate is locked, even though I had arranged for Mr. Charles LoBue to unlock it for us. John N. and I slide the ~~plc~~^{plc} pole up through the clamps holding it and through the chain and lock around it, thereby gaining access to the site (i.e. opened gate).

0805 Meet Layne-Western drillers at the Village of South Chicago Heights Public Works building on Butler Rd., just south of Sank Trail Rd. The drillers will get their potable water from here. They are currently filling the water tank on the back of their truck. ~~Mr.~~^{Mr.} Brian Bichunko, Sonny, John, and one other worker are the Layne-Western employees.

0820 Layne-Western workers, John Noyes and I arrive at the Miguel A. Sanchez

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LoBue #2 site. Sonny and Brian (Layne), John Noyes and I walk around the site to assess the need for ATV rig at the well locations and to see which well location we will start at. Other two Layne workers begin initial decon of augers and drill rig and equipment.

0845 Access to well locations doesn't appear to be a problem. Decide to start at MW07. Begin initial calibration of safety equipment. OVA battery low; decide not to use. Calibrate HNU w/ 100 ppm isobutylene gas cylinder. HNU EPA serial #717881 w/ 10.8 eV probe EPA serial #717955. Read 54 ppm at span = 8.26. Turn on HCN meter, bat. O.K., initial reading 00 ppm, EPA decal #717905. Turn on Radiation Alert Monitor 4 meter, EPA #717980, Initial reading is 0, battery O.K.

0920 Layne has set their rig at MW07. Miguel A. Sanchez

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Hold brief safety meeting outlining hazards and proper safety procedures (i.e. use of hard hat and safety glasses whenever working around rig.). A man from the gas company was out here during the safety meeting. He said as long as we're inside of the power lines running along the perimeter of the site we're o.k.

There was marking at the front gate on the ground in red paint saying telephone was o.k.. There was also an "OK" written in yellow paint.

0930 Begin drilling MW07. First split spoon sample from 0-2' for logging purposes. HNU reading at the split spoon sample is background. HNU reading at borehole is background. —

Split spoon sample will be collected every 5 ^{met.} feet. —
John Noyes (BVWST) is doing

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 M.O.2
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logging of borehole. —

1000 Noticed white steam or vapor ^{mit.} ~~com~~ emanating from cuttings at 18-20' depth. HNU reading at the cuttings is background. No odor from cuttings is noticeable.

1015 Collect split spoon sample from 25-27' BGS. John Noyes logs the sample. HNU screening of sample is background. ^{HEN M.O.2 - 10/19/93} ~~HNU~~ reading at borehole is background. The s.s. sample looks like a grey clay. —

1030 S.S. sample from 35-37' BGS. HNU readings at bore hole, inside the 2 1/4" augers, and in the breathing zone both background. HNU screening of ss. sample is also background. Soil is a clay. Note that the 2 1/4" augers are being used to drill down ^{the} ~~the~~ and collect ss. samples for logging of borehole. The drillers will ^{mit.} ~~com~~ overdrill the borehole using 8 1/4" I.D. augers after the overburden/bedrock interface at

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5' intervals is complete. Also, note that Brian Biehmko (Layne) left the site before the drilling began. He will not be back.

There are three Layne ^{M.S. workers} ~~workers~~ onsite.

1050 S.S. sample from 45-47' BGS collected. HNU screening at the top of the augers is background. HNU reading of S.S. sample is also background. Soil is getting sandy. Note that water was encountered at 42' BGS, but is no longer present.

1115 Encountered auger refusal at 54' BGS. Attempted to get S.S. sample, only ~2" of recovery of broken limestone. HNU readings at the top, inside augers ^{M.S.} is background. HNU screening of S.S. sample also background. Layne will now retract their augers in the borehole.

1120 Weather check: overcast, cool,

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temp. ~ 65°F, winds calm, out of south.

1125 Note that MW07 is approx. 50' N. of Sank Trail Rd., North edge, and ~200' W. of entrance gate.

1135 I leave the site to go buy supplies (trash bags, paper towels, lock, chain, etc.). Layne workers are in process of removing 2 1/4" augers out of the ground. John Noyes will oversee their work while I am gone.

1320 Back at the LaBlue #2 site. I met w/ John Noyes at the store buying supplies. He said drillers had decided to take lunch after they finished pulling the augers. The drillers are now back onsite and have just begun to overdrill the borehole at MW07 using 8 1/4" I.D. augers (hollow stem).

1325 "The 'red head' bit at the top of the augers broke while attempting to drill the borehole. The driller says it is the second

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bit that has broken. Apparently there is stone or concrete in the borehole preventing the augers from advancing. Driller says he doesn't have any more "red head" bits and will have to take the two broken ones to get welded. He will also try to get another bit sent to him from his office.

1330 The driller (Sonny) and ~~two~~^{one} of his workers leave the site to go get the "red head" bits welded. The other Layne worker stays onsite to "clean up" around the drill rig.

1410 Sonny and the other Layne driller are back onsite. They were unable to weld the "red head" bits back together because they were "cast hard." They will attempt to "drill direct" (i.e. w/out using the "red head").

1430 Unable to drill direct because
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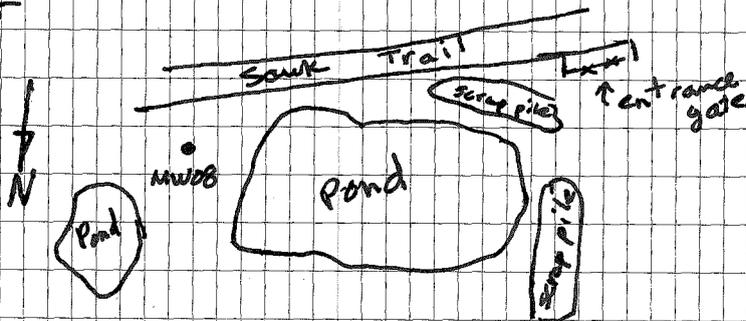
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the drill head they have does not fit over the auger. Sonny (Layne) says they will move the rig out, go down the ~~2 1/4~~^{mid.} 2 1/4" augers, and then move to another well location to do the s.s. sample at 5' intervals at that location. One of the Layne workers will go back to their office to get other "red head" bits.

1500 Layne workers done decoring 2 1/4" augers & rig. Move to MW08 location. One of the Layne workers has left the site to go back to their office to pick up red head bits.

1515



Location of MW08

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- 1515 Layne has set up at location MW08, approx. 100' N of Sank Trail Rd., SE of Pond #2, in the SE section of the site. Layne take 0-2' s.s. sample. HNU reading at borehole is background. HNU reading of s.s. sample also background.
- 1530 Auger refusal encountered at 6-7' BGS. Will have to move the rig forward ~3' and restart the borehole for MW08. —
- 1550 I leave the site for today. John Noyes (BWST) and two Layne-Western workers will stay onsite to restart the borehole for MW08. —

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- 0700 John Noyes (BWST) and I arrive at the LaBue #2 site. Layne-Western workers are not here yet. Drilling activities are expected to continue today. John N. informs me that Layne lost 5' of 2 1/4" I.D. Hollow stem auger and drill rod while attempting to drill borehole for MW08. Also, there was apparently two people shooting guns off yesterday afternoon near the site after I left. They were arrested.
- 0715 John N. and I walk the area near MW08 to find a new location where the drillers can start the borehole again for this well. —
- 0735 Two Layne workers, Sonny and Eric, arrive at the site. —
- 0745 Sonny (Layne driller) says they will need a couple of hours to fix the center plug and auger bit that broke yesterday afternoon. We also walked to MW06, on the SW section of the site, where Layne will be drilling next. The

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drilling of the borehole at MW09 has been abandoned for the time being.

0815 Layne workers are working on fixing equipment. John Noyes and I recharge the OVA w/ H₂ gas.

0850 Drillers have moved their rig over near location for MW06 and have gotten stuck in a low lying area w/ soft ground. They are now attempting to get unstuck.

0910 Drillers unable to get their drill rig unstuck. They decide to go call their office and ask them about getting an ATV rig mobilized to the site. John N. and I also leave the site to go call our office and appraise them of the situation.

0945 Back at the LoBue #2 site. Drillers are also back onsite. They are trying to get the drill rig unstuck.

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1000 Sonny (Layne driller) says he will try to get a front end loader or bull dozer to fill in some of the low areas and gain access to the well locations. He will use the brick, slag, rebar stockpiles on the site as fill material to create a road to the well locations. The drillers now leave the site to go use a telephone to try to get a front end loader or bull dozer.

1015 Layne drillers are back onsite. Sonny says his office won't authorize renting a front end loader or dozer because they don't know who would pay for it (ie. BWST or Layne). Layne will mobilize an ATV rig to the site to gain access to the well locations w/out being worried about getting stuck. The ATV rig won't be here till Monday 10/25/93. Sonny says he will go get some plywood to place on the ground to gain better access to MW06.

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Layne drillers leave the site. —
1020 John Noyes and I leave the site to go to the Roadway Trucking ESI Group 1 site to pick up three drums that were used to containerize ground water development fluid. The drums are now empty. We will take the drums to the LoBue #2 site and decom. them w/ Layne's steam cleaner. This is being done under direction from Steve Mrkvicka (BWST project manager). —
1035 At the Roadway Trucking site. Pick up three empty drums. —
1050 Back at the LoBue #2 site. Layne drillers have also just arrived back onsite. —
1145 Layne drillers finally get their drill rig unstuck. Sonny (Layne) says he won't try to get to MW06 again because ^{m.d.} the ground is too soft and he says he may get stuck again.

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The drillers will instead move the rig back to MW07 and set up over the 8 1/4" I.D. hollow stem augers that are in the ground at that location. The Layne worker coming from St. Louis w/ a new drill head and other equipment should be arriving here soon. Once he gets here, the Layne drillers will be able to use the drill head to pull the 8 1/4" H.S. augers and then continue to overdrill the borehole and set the 6" PVC casing. —
1200 Layne drillers have moved their rig over ^{mt.} to MW07. Decide to break for lunch. Everyone leaves the site. —
1245 Check in w/ Steve Mrkvicka. Inform him of situation^{mt.} and options to either get ^{mt.} the ^{mt.} a ^{mt.} loader or dozer and use some of the waste piles to construct a access road to the wells or to wait till the ATV rig is mobilized to the

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site on Monday. Steve M. expressed some concern about spreading waste piles around because we do not have owner's permission and because we consider them potential waste sources. He will check w/ Larry Magill (BRWST) to make sure BRWST would not have to pay if a loader was rented and check w/ Dick McAvoy (BRWST) about spreading the waste piles around. —

1310 John Noyes and I are back on-site. Drillers are also on-site. They are in their truck waiting for the Layne worker coming from St. Louis to arrive ^{and} w/ the needed equipment. —

1340 Sonny (Layne) went to call his office again and is now back on-site. He said the Layne worker bringing equipment from St. Louis ^{probably} probably won't be arriving until approx. 3 p.m. because he did not

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depart from ~~the~~ ^{the} St. Louis ~~until~~ ^{not} till ~9 a.m. There is nothing we can do except wait because the drill rig can't get to MW05 and MW06 without getting stuck and the ^{replacement} equipment coming from St. Louis is not here and the drillers need it to continue work on MW07. —

1345 Weather Check: Light rain falling, cold, ~60°F, very light wind. —

1400 John Noyes and I leave the site to go get the oil changed on the EPA vehicle. Layne workers still waiting for the replacement equipment to ^{arrive} come from St. Louis. —

1435 Back onsite. Layne workers still sitting in their truck waiting for the equipment to arrive. Light rain still falling. —

1600 Still waiting for Layne's equipment to come. Layne workers leave the site to check w/ their office if they know why he hasn't arrived yet. John N. and I also leave the site to check in w/ our office.

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- 1605 Call Steve Mrkvicka (BUDST). Inform him we're still waiting on equipment to arrive so Layne can continue their work. Steve M. says ~~that~~ ^{mf.} we should not move any waste piles and we should try to get as much of well MW07 done as possible once Layne's equipment man arrives. He also said ~~at~~ ^{mf.} he would call Brian Biehunko (Layne) to see about getting an ATV rig to the site sooner than Monday and working through the weekend. —
- 1615 Back onsite. Layne drillers are also back onsite. Sonny (Layne) says his office hasn't heard from Pete, the ^{M.L. Layne} equipment worker bringing the equipment, and don't know where he is. We decide to continue waiting. —
- 1650 Layne worker, Pete, arrives at the LoBue #2 site bringing the replacement equipment Layne needs to continue working. Layne workers
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- will now check if the replacement bits fit. Note that light rain is still falling. —
- 1715 Layne workers attempted to put the drill head bits on Kelly on the rig, but they did not fit. They did bring another red head, but Sonny is ^{mf.} hesitant to use it because he's ^{mf.} afraid it will break too. He will have to take the drill head bits to a machine shop to get them sized right. We decide it is best to quit for today. Layne workers will call their office tonight to see if they have any suggestions for a new plan of attack. Work will resume tomorrow morning. —
- 1730 Layne workers (3) leave the site for today. John Noyes and I lock the front gate w/ the chain and lock we bought yesterday, and also leave the site for today.

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Note: Refer to logbook #3 for drilling and monitoring well installation notes. m.a.s. 10/21/93

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December 06, 1993

0730 Steve Mehay and Miguel Sanchez of BVWST arrive at the LaBue #2 site. We unlock the front gate and drive onto the site. The purpose of this visit is to sample the four monitoring wells just installed and one nearby residential well. We decide to set up around well MW-07 and purge that well first.

0745 Weather check: Overcast, cold, temp. $\sim 35^{\circ}\text{F}$, windy, winds out of west.

0815 Responsibilities are as follows:
Miguel Sanchez - Field team Leader, Health & Safety Officer, and Quality Assurance Officer.
Steve Mehay - Field Data Coordinator and primary sampler.

0820 Calibrate HNU (EPA decal # 717881) w/ 10.2 eV probe (EPA # 717955) using 100 ppm isobutylene cylinder (lot # 29048). Read 54 ppm, span adjusted to 9.36.

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0825 Steve M. calibrates 3000 Temp.-Level-Cond. (T-L-C) Meter (EPA # 717928) using TDS/Conductivity Standard Solution # 442-3000 made by Myran L. Company. Read 3920 μohms as indicated on bottle. Also calibrate pH meter (model SA250, EPA # 717924) at pH buffer of 7 solution and pH buffer of 4 solution.

0830 Open well MW07. HNU reading at the top of the well head is background. Background HNU reading ^{ms.} also is 0.2 ppm. Measure water level at 63.0' from top of inner 2" PVC riser pipe. Total depth = 78.35' from top of inner 2" PVC riser pipe. Cond. = 970 μohms , Temp. = 11.7°C .

0835 Begin bailing MW07 using a stainless steel bailer decontaminated in the warehouse (and wrapped w/ aluminum foil). Take initial pH reading: pH = 7.3. Water is silty.

0855 Approx. 3 gal. bailed. Take measurements: pH = 7.3, temp. = 10.6° , cond =

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1050 μohms . Water is still silty.

0910 Approx. 6 gal. purged from MW07. Take measurements.

PH = 7.3, temp. = 10.1°C, cond. = 1120 μohms . Water still silty.

0925 Finish bailing MW-07. Approx. 8 gal. purged, which is approx. 3 casing volumes. Will let well recover and then sample. Water level dropped down to ~3' from bottom of well.

0930 Steve M. and I leave the site to go buy supplies (rope, distilled water, ice, baggies, towels).

1015 Back onsite. Head toward MW-06, which is along the west property line, adjacent to the intermittent stream.

1040 Open well MW-06. HNu reading at the top of the well head is background. Breathing zone also background. Water level = 32.96' from top of inner 2" PVC riser pipe. Depth to bottom of

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well = 50.32' from top of inner 2" PVC riser pipe. Cond. = 950 μohms , Temp. = 11.1°C.

1045 Put Fultz pump (submersible, EPA decal #) in MW06 to begin development of this well. This well was not developed by the drilling sub., all the other wells were. Turn pump on, but it doesn't seem to be pumping. We can hear the pump working, but no water is being pumped up. Try putting pump near top of water column and at the bottom, but still no water being pumped out.

1100 Call Bal Barera (Bvwst) He says the water in the well may be too silty for the fultz pump to work since the well wasn't developed. He will get a hand pump for us to use to develop this well tomorrow.

1115 Pull pump out of MW-06. We won't develop this well until tomorrow. Try putting Fultz pump in d.i. water to see if it will pump. The pump is

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working w/ the d.i. water so we don't understand why it didn't work ~~with~~^{ms.} in the well. _____

1125 Finished deconing Fultz pump and demobing from MW06. _____

1135 At MW-05, the background well. We will purge this well next.

1145 Set up at MW-05. Open well, remove cap. HNs reading at the well head and in the breathing zone are both background. Water level = 44.43' from top of inner 2" PVC riser pipe. Total depth of well = 61.95' from top of 2" PVC riser pipe. Cond. = 3300 μ ohms; Temp = 11.8°C.

1200 The rope we bought this morning is a stiff yellow rope to which we cannot ~~attach~~^{ms.} tie a good knot to attach it to the bailer (i.e. knot comes off too easy). We are unwilling to use it because the bailer may get lost in the well. We will break down and go get rope before ~~continuing~~^{beginning ms.}

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the purging of MW05. _____

1215 Leave MW-05. _____

1220 Steve M. will set up to sample MW-07, which was purged this morning. I leave the site to go exchange the rope we bought earlier today for one that is less stiff, and will also bring back lunch. _____

1300 Back onsite. Steve M. is preserving the total metals containers (1-L polys) with HNO₃ and the ~~cyanide~~^{ms.} containers for cyanide samples w/ NaOH. Break to eat lunch. _____

1325 Lunch break over. Prepare to do rinsate and trip blank. _____

1330 Pour trip blank. HPLC water (lot #8F490) poured into two 40 ml vials prepreserved w/ HCl. Sample # is EWT69. BRWST sample # LB-TB01-201. _____

1335 Pour rinsate blank. HPLC water (same lot #) poured ^{into ms.} through a deconed bailer and then poured to sample containers to mimick sample collection procedure. The EPA sample numbers are

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EWT68 for organics, MEWZ66 for inorganics. ~~BVWST~~ sample # LB-8801-201.

1350 Filter portion of ~~Rinsate~~^{m.l.} rinsate blank sample for total metals analysis using a portable peristaltic pump (Masterflex sampling pump, EPA #717974) and Instrumentation Northwest, Inc. 0.45 μ m filter. Sample ~~pour~~^{m.l.} filtered into a 1-L poly preserved w/ HNO₃.

1410 Begin sampling well MW-07. The bailer used to purge the well was left inside the well while the well recovered, so the same bailer is used to bail out the sample. VOA vials filled first, then extractables containers, then Pest/PCB, then total metals, then cyanide. This is also MS/MSD location, so triple the normal sample volume is being collected. This is EPA sample # EWT66, MEWZ64 and BVWST sample #

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LB-~~8801~~^{m.l.} GW07-001.

1450 Finish collecting sample from MW07.

1500 Filter portion of sample from MW07 for total metals using the peristaltic pump and a 0.45 μ m filter. The sample is filtered from an unpreserved 1-L poly containers to ~~an~~^{m.l.} 1-L poly containers preserved w/ HNO₃.

1515 Attempted to call the residential well owner on the other side of Sauk Trail Rd, SW of the site. No answer. We have been trying to call her all day with no success. Also called the office to check in w/ Steve Mrkvicka (BVWST) and inform him of our progress.

1530 At MW-05, preparing to ~~sample~~^{purge m.l.} this well.

1550 Begin purging MW05 using a deconed stainless steel bailer and nylon rope. Take initial measurements: pH = 7.0, cond. = 3,300 μ ohms, temp = 9.9°C. Water is slightly turbid.

1605 Approx. 3 gal. purged from MW05. Take measurements: pH = 7.0, cond. =

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3390 μohms , Temp. = 10.5°C . The water is still turbid. —

1615 Approx. 6 gal. purged. Take measurements: $\text{pH} = 7.0$, $\text{cond.} = 3,420 \mu\text{ohms}$, $\text{temp.} = 10.2^\circ\text{C}$. —
Water is still turbid, silty —

1625 10 gal. purged from MW05. This is equal to 3 water column volumes. Take measurements, $\text{pH} = 7.0$, $\text{cond.} = 3,460 \mu\text{ohms}$, $\text{temp.} = 10.3^\circ\text{C}$. Measurements within 10%. Purging complete. We will now sample this well. Note that the water is still turbid and slightly silty. —

1635 Begin collecting background sample from MW05. Same bailer used to purge the well is used to bail water for the sample. Water from bailer poured to containers. This is EPA sample # EWT63 for organics and MEW261 for inorganics, and BUWST sample # LB-GW05-001. —

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1650 Finished collecting sample from MW05. Water sample is turbid, slightly silty. Water had a strong odor of sewage, the odor became more evident as more water was bailed from the well. —

^{me}
1700
150 Filter portion of sample from MW05 for total metals analysis using peristaltic pump and a $0.45 \mu\text{m}$ filter. —

1705 Pack up equipment to leave the site for today. It is dark already.

1715 Lock front gate and leave site for today. Sampling activities will continue tomorrow. We will now head to the warehouse to tag, bag, and do the paperwork for the samples collected today. —

1820 Arrive at the warehouse. Begin filling out tags and paperwork. —

2100 Done with paperwork for today's samples. Also unloaded equipment (i.e. ^{Fultz} peristaltic p, ^{pump} ^{me}, etc). ^{12/6/93} Steve M. and I now head home. —

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December 07, 1993

- 0740 Arrive at the LoBue #2 site.
Steve M. (BUWST) is already here.
Unlock gate and enter site.
- 0745 Load equipment needed into
suburban to head toward MW06.
We will work on developing
that well first.
- 0800 At MW06. Suit up in level D
w/ saranex and begin setting
up the PVC hand pump which
will be used to develop this
well. The pump is in 5' sections
with ^{mt.} inner and outer PVC
flights.
- 0830 Put hand pump in the well.
10 - 5' sections of the PVC pump
are put in the well, for a
total ^{length mt. 12/7/93} depth of 50'.
- 0845 Begin pumping well MW06
manually. The inner PVC pipe
is moved up and down by hand.
- 0900 Hand pump doesn't seem to be
working. Trying to figure out
what the problem is.
- 0915 The hand pump had been set

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- in the well in the wrong configura-
tion. Pump has now ^{mt.} to in the
well the right way. Begin pumping
water out for development.
- 0930 Well MW-06 pumped dry. The
pump ^{extends to mt. 12/7/93} is approx. 0.6" from bottom
of well. Approx. 7 gal. pumped out.
The water is very silty. Will let
well recover, then surge and
pump the well again. Meanwhile,
we will go to well MW-08 to begin
purging that well.
- 0940 Calibrate HNu, w/ 10.2 eV probe
(same ones used yesterday) using
same isobutylene cylinder as yester-
day. Read 54 ppm as indicated
on cylinder; span adjusted to 9.38.
- 0950 Weather check: Overcast, cold,
temp ~ 30°F, winds calm, out of
west.
- 1000 Have set up around well MW08,
which is the easternmost well.
This well is in the SE section
of the site, SE of Pond #2,
~ 100' from Sank Trail Road.

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Calibrate pH meter (same one used yesterday) at pH buffer of 7 and pH buffer of 10 solution. This is a two point calibration. The ~~to~~ pH buffer of 10 solution was selected because the pH readings taken yesterday at MW07 were slightly above 7.0.

1010 Open well MW08. Cap removed. Background HNu reading is 0.3 ppm. HNu reading at the well head is also background. Measure water level: 71.6' from top of inner 2" PVC riser pipe. The water level used is EPA decal #717929. The total depth of the well is 92.7' from top of 2" PVC riser pipe.

1115 - Mehay making this entry. Sanchez begins bailing MW08 after team untangles a knot from the rope.

1130 The conductivity of MW08 at about 2 gallons purged is 770 mohms - temp is 10.0°C and pH is 7.3.

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1200 Mehay purges MW06 with the hand pump. About 3 gallons for a total of about 10 gallons were purged before the well went dry.

1225 Approx. 7 gal. bailed from MW08 so far. Take measurements: pH = 7.1, cond. = 730 mohms, temp. = 10.5°C, water is greyish in color and silty.

1250 Approx. 10 gal. purged from MW08. Take measurements. pH = 7.2, cond = 740 mohms, temp. = 10.6°C. The water is greyish in color, less silty than before.

1255 A total of 11 gal. have been purged from MW08. The measurements are within 10%. 11 gal. is equal to 3 water column volumes. Therefore this well is considered purged. We will ^{not} ~~not~~ sample this well ^{at 12/7/93} after lunch.

1305 Steve M. and I leave the site to go buy lunch.

1400 Stop by res. well owner on way

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back to site. She is home. I told her we would be back later today to sample the well.
1405 Back onsite. Head toward MW08.

1415 Call office to check in with Steve Mrkricka (BWST): Steve Mrkricka says we can consider well MW06 developed since we pumped it dry so we can go ahead and sample it.

1420 At MW08. Begin sampling this well, using bailer used to purge the well. The bailer had been left in the well after it was purged. This is sample EWT67, MEW265, and BWST sample LB-GW08-001.

1455 Collection of sample from MW08 complete.

1515 Filter portion of sample from MW08 for total metals analysis using peristaltic pump and 0.45 μm filter. Same procedure as yesterday was used.

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M.A.S.

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1525

~~1525~~ At MW06. Begin dismantling the hand pump in the well.

1540

~~1540~~ Hand pump dismantled. Use decaered stainless steel bailer to purge water out of the well.

1550 Approx. 3 gal. purged out of well MW06. Water is brownish and silty. The water also has a mucky odor to it. The water from well MW08 also had this odor. Take measurements: pH=7.1, temp. = 9.6°C, cond. = 1330 μohms . This well considered developed. Will let well recover for a little while and then sample it.

1620 Begin sampling MW-06. A duplicate sample will also be collected from this well. The primary sample is EWT64, MEW262 and BWST #LB-GW06-001. The duplicate sample is EPA # EWT65, MEW263, and BWST #LB-GW06-101. The duplicate and primary samples are filled concurrently, pouring water from the well into the containers using the stainless steel bailer. The

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Sample containers are filled in the following order: VOAs, BNA, Pest/PCB, total metals, and finally cyanide. This is the same way all the other wells were sampled. _____

1650 Finished collecting primary and duplicate samples from MW06. _____

1655 Portion of sample and dup. from MW06 for total metals analysis is filtered using the same perastaltic pump w/ new tubing and a new $0.45\ \mu\text{m}$ filter. _____

1700 Note that the water sample from MW08 was much less turbid than when the well was developed. _____

1705 Have picked up equipment. We now lock the front gate and leave the site. Head to residential well owner's house. _____

1710 At the residential well owner's house. Lights are off. Knock on door - no answer. She is not

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home. After waiting for a little while we decide to leave her a note and ask her to give me a call at the office so we can set up a time to sample her well. _____

1725 Leave res. well owner's property. Head toward warehouse to do paperwork, pack samples, and unload equipment. _____

1835 Arrive at warehouse. _____

2100 Finished paperwork and packaging of samples collected today and yesterday. Steve Mehay goes to Fed. Ex. to drop off the coolers containing the samples. I stay at the warehouse to unload equipment from EPA van. _____

2145 Steve Mehay back at warehouse. Load EPA van for another field trip tomorrow. _____

2230 Finished loading van. Workday over. _____

~~Miguel A. Sanchez
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December 08, 1993

1000 I have arranged to sample a residential well ~500ft southwest of the site today. I head over to the BVWST ARCS warehouse to pick up Baltazar Berena (BVWST), who will help me sample the residential well.

1045 Pick up Baltazar B. and the necessary equipment from our warehouse to sample res. well. We now head toward the site.

1150 Arrive at 162 E. Sauk Trail Road. This is the location of the res. well nearest the LoBue #2 site. It is located ~500 feet southwest of the site. Talk to the owner of the residence, Mrs. Lustid. She believes the well is ~125 ft. deep, with a pump at ~80 ft. that was put in ~two years ago. The well is in the basement of her house. A pressure tank and associated piping are attached to the well. A water filter/softener is also attached. We

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will collect the res. well sample from a water valve near the pressure tank, to collect water that has not passed through the water filter/softener.

1155 Begin purging the res. well. We have attached a hose to the water valve and the purged water is being discharged to a drain in the basement floor. Note that the purge water has a very foul, rotten egg smell (hydrogen sulfide?). Pressure valve reads ~40 psi during the purge.

1210 Purge of res. well complete. Prepare to sample well.

1215 Begin collecting res. well sample RW01. The hose has been detached from the water valve, and the water sample is being collected ^{M.A.S. 12/08/93} directly from the water valve into the sample ^{M.A.S. 12/08/93} containers; ^{no sampling equipment} therefore, no equipment is being used. A duplicate sample is being collected concurrently with the investigative sample. For the ^{EPA M.A.S. 12/08/93} investigative sample, the sample #'s are: 21327/8019HQ-01 for organics,

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21327/7995E-02-01 for inorganics,
and the BVWST sample no. is:
LB-RW01-001. For the duplicate sample
the sample #'s are:

EPA org. sample #: 21327/8019HQ-02

EPA inorg. sample #: 21327/7995E-02-02

BVWST sample #: LB-RW01-101. —

The water is mostly clear with
a strong rotten egg smell. —

1230 Collection of res. well sample
RW01 complete. Take photos. —

Roll #3, Photo #1, facing south,
^{M.A.S. 12/08/93}
~~sample location RW01~~, pressure

tank and associated piping for
res. well RW01. The well is located
behind the tank. Photo #2, Roll #3,

close-up of labels on the water
system pressure tank, facing S. —

1245 Pour field blank for res. well sample
HPLC water (lot # BG274) is

poured directly into sample containers

The containers already have the
appropriate preservatives in them,

if required. Note that a rinsate
blank is not needed because no

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sampling equipment was used to collect
the res. well sample. The sample
#'s for the field blank are:

EPA org. sample #: 21327/8019HQ-03.

EPA inorg. sample #: 21327/7995E-02-03.

BVWST sample #: LB-FB01-201. —

1250 Pour trip blank for today's water samples.

HPLC water (lot # BG274) poured directly
into two 40-ml vials prepreserved w/
HCl. EPA sample # is: 21327/8019HQ-04.

BVWST sample # is LB-TB02-201. —

1300 Leave the res. well owner's property
and head to the LoBue #2 site
to photograph monitoring wells
sampled 12/06/93 and 12/07/93. —

1310 Baltazar B. and I are at the
LoBue #2 site to photograph
monitoring wells. Photo #3, Roll #3
taken of monitoring well MW05,
facing W. —

1315 Photo #4, Roll #3, taken of MW06,
facing W. —

1320 Photo #5, Roll #3 taken of MW07,
facing SE. —

1328 Photo #6, Roll #3 taken of MW08,

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facing S. _____

1340 Lock entrance gate and Leave the LoBue #2 site. We will take lunch break and then head back to the BVWST ARCS warehouse to pack the samples collected today. The ESI sampling for the LoBue #2 site is now complete. _____

1545 At the warehouse. Baltazar B. (BVWST) and I unload the vehicle and then begin filling out tags and paperwork for samples collected today. _____

1800 Samples have been packed in coolers for shipment to the CLP laboratories. Head to Fed. E to drop of the coolers for shipment. The sampling event for this ESI site is now complete. _____

~~Miguel A. Sanchez
12/08/93~~

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